TJ Pavaritpong

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EDUCATION

University of Illinois Urbana-Champaign — Expected Graduation: Dec 2024
B.S. in Statistics & Computer Science; GPA: 3.36 — *Champaign, IL*

Relevant Coursework: Intro to Algorithms & Models of Computation, Computer Architecture, Database Systems, Data Structures, Discrete Structures, Linear Algebra, Multivariable Calculus, Numerical Methods, Statistics & Probability

EXPERIENCE

Agoda — Jan 2023 – Jun 2023
Data Engineer Intern — *Bangkok, Thailand*

- Migrated 12 Google Ads API report downloader applications across teams, leveraging Spark, Scala, and GitLab CI/CD for streamlined collaboration and efficient data processing
- Optimized algorithm performance, reducing application runtime by a linear factor from 4 hours to only 20 minutes
- Resolved two critical production incidents caused by incorrectly formatted data returned by the Google Ads API
- Developed prompts for a GPT-3-powered Slack bot to explain SQL and Spark ETL pipelines to technical and non-technical stakeholders
- Devised and implemented a data validation rule based on Bollinger Bands in SQL to improve data anomaly detection; Conducted comprehensive backtesting using RStudio against historical data to ensure correctness

Zipmex — Jun 2022 – Jul 2022
Software Engineer Intern — *Bangkok, Thailand*

- Created and styled new UI components to match Figma designs for trading-related pages, contributing to a website revamp and light theme release
- Refactored legacy UI components into reusable React/Material-UI components, enhancing visual consistency
- Improved code quality and debugging by enhancing type inference in the React & Redux codebase with TypeScript

Central Group — Jun 2019 – Aug 2019
Software Engineer Intern — *Bangkok, Thailand*

- Identified inefficiencies within retail store and warehouse operations, leading to targeted improvements.
- Streamlined warehouse processes across 200 service points by integrating Scandit's barcode-scanning library into the employees' mobile app, written in Ionic and Angular, to enable instant bulk-scanning of shipment labels
- Leveraged Tesseract.js' optical character recognition (OCR) to enable product information extraction from receipts and shelf tag verification and correction
- Optimized text recognition of the Thai alphabet and numerals by tuning image-processing settings

PROJECTS

Illini CC'd | *React, Node.js, MySQL, GCP, Material-UI*

- Developed a React-based website that recommends credit cards to users based on their preferences
- Led the creation of the front-end UI and collaborated with a team to design the database schema, scrape the web for credit card offers and benefits, develop API endpoints, and host the application on Google Cloud Platform

Openflights Dataset Analyzer | *C++, Catch2*

- Implemented BFS and Dijkstra's algorithm to find the shortest flight itinerary between two airports
- Implemented PageRank to identify the biggest airport hubs in a given region

Blackjack Simulator | *C++, Catch2, Cinder*

- Developed a 2D blackjack simulator designed to train players in optimal strategy

SKILLS

Languages: Scala, Python, R, C++, TypeScript, JavaScript, SQL, HTML, CSS
Frameworks & Libraries: Spark, React, Redux, Node.js, Material-UI, NumPy, pandas
Developer Tools: Git, GCP, MongoDB, MySQL, Linux/Unix